National Aeronautics and Space Administration

Lyndon B. Johnson Space Center
Houston, Texas

Surfing the net

JSC and other field centers have stepped up to the challenge of the Internet. Story on Page 3.

Space art

The works of artist Robert McCall are currently on display at Space Center Houston. Story on Page 4.

Space News Roundup

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Galileo descends into Jupiter's surface

Probe parachutes in to relay information about planet's surface

NASA's Galileo spacecraft radioed confirmation late last week that it has entered Jupiter's environment, crossing over the boundary from interplanetary space into the giant magnetic cocoon around Jupiter called the magnetosphere.

"With the spacecraft now in the magnetosphere, we begin our first direct measurements of the Jupiter system," said Galileo Project Manager William O'Neil at the Jet Propulsion Laboratory.

Data from Galileo's magnetometer confirmed that the spacecraft passed the milestone on Nov. 26 at a distance of about six million miles from Jupiter's cloud tops. After a six-year voyage through the solar system, Galileo is less than a week away from taking up permanent residence around Jupiter. On Thursday, Galileo's previously deployed atmospheric probe plunged into Jupiter's cloud tops and descend into the giant planet on a parachute. Overhead, the Galileo spacecraft itself collected and record data radioed from the probe during the 40- to 75-minute probe mission. An hour after the probe mission was completed, Galileo began to fire its onboard rocket to slow down and allow itself to be captured into orbit around Jupiter to begin a two-year mission of closeup studies of Jupiter's large moons, the planet itself, and continuous measurements of the magnetosphere.

Jupiter's magnetosphere is like a giant bubble around the planet. A shock wave—called "bowshock" after the wave that builds before the bow of a ship—exists where the magnetosphere faces the stream of charged particles flowing outward from the Sun, called the solar wind. As the solar wind flows around Jupiter, the magnetosphere tapers off like a wind sock, with the whole invisible structure moving in response to buffeting by the solar wind.

Galileo scientists said they first saw signs of the bowshock on Nov. 16, but the bowshock apparently moved back and forth in response

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Galileo's previously deployed atmospheric probe plunged into Jupiter's cloud tops Thursday and descened into the giant planet on a parachute.

New space, life science director named

By Eileen Hawley

H. David Short, assistant professor of surgery at Baylor College of Medicine, has been named director of Space and Life Sciences.

Short's appointment was effective Monday under an Intergovernmental Personnel Assignment between NASA and Baylor. He replaces Donald Robbins who served as acting director.

Short

"I am pleased to welcome Dr. Short to this important position," NASA Administrator Daniel S. Goldin said. "He brings a wealth of scientific expertise and leadership capability that will be essential in planning and implementing the invaluable science that will be conducted on the space shuttle and the International Space Station."

The Space and Life Sciences Directorate manages programs in medical science, biological research, lunar and planetary research and support to astronaut flight crews.

Short teaches at Baylor College of Medicine, treats patients and specializes in clinical research on organ transplantation. A clinical transplant surgeon, Short performed research that helped develop the current heart and lung transplant programs at Baylor and The Methodist Hospital. He also has done research on the heart assist pump developed by Baylor surgeon Dr. Michael DeBakey in conjunction with NASA.

Top: Jim Dean and Renee Julian, both of the Space Station Program Utilization Office, use the Integrated Services Digital Network to communicate with school children in San Antonio and meeting attendees in New Hampshire last week. Right: Jay Cory, left, of Johnson Engineering, and Mike Prendergast of the Flight Crew Support Division control the video switching to enable Dean and Julian to talk with the students and give tours of the various space station mock-ups.

JSC Photo by Mark Sowa

Interactively educating kids

By Karen Schmidt

Students from several schools in San Antonio and Christa McAuliffe Foundation meeting participants in New Hampshire were treated to an interactive tour of the space station last week via desktop video conferencing that someday could be used to keep orbiting astronauts in touch with their families.

Fourth grade students from Travis Elementary, Dellview Elementary and Morrill Elementary schools in San Antonio were given a tour of the space station mockup and training facility in Bldg. 9. Renee Julian and James Dean of the Space Station Utilization Office acted as station "crew members" and explained to students how astronauts eat,

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Endeavour rolls to pad

By James Hartsfield

Endeavour was on schedule this week, planned to roll out to Kennedy Space Center's Launch Pad 39B Thursday to take aim at a liftoff on STS-72 perhaps as early as Jan. 11, 1996.

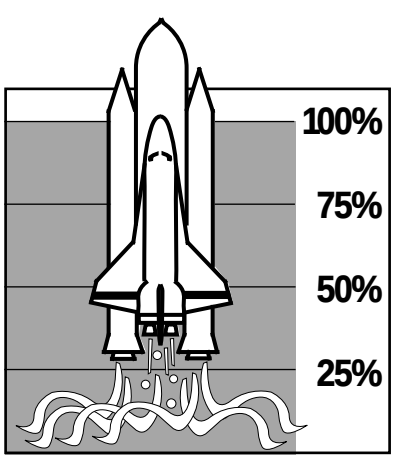
Endeavour was moved from its processing hangar to the Vehicle Assembly Bldg. Nov. 30 and mated to the external fuel tank and solid rockets for STS-72. As preparations continue, the STS-72 crew—Commander Brian Duffy, Pilot Brent Jett, and Mission Specialists Leroy Chiao, Winston Scott, Koichi Wakata and Dan Barry—will travel to KSC Sunday to take part in a dress rehearsal countdown at the launch pad planned for Monday and Tuesday.

STS-72 will retrieve the Japanese Space Flyer Unit from orbit, deploy and retrieve the OAST-FLYER satellite and feature two space walks to test construction equipment and methods for the International Space Station. On Thursday and Friday, the mission will be the focus of a series of press conferences planned to air on NASA Television, beginning with an overview of the mission by Lead Flight Director Bryan Austin at 8 a.m. on Thursday.

Other Thursday briefings will include an overview of the Space Flyer Unit at 9 a.m.; an overview of the OAST-FLYER at 10 a.m.; a description of the NASA/National Institute of Health experiments at 11:30 a.m.; a briefing on the Get-Away Special experiments at 12:30 p.m. and an overview of the Commercial Protein Crystal Growth experiment at 1 p.m.

On Friday, a briefing on the planned Extravehicular Activities will be held at 11:30 a.m. and the STS-72 astronauts will hold a crew press conference at 1 p.m.

Meanwhile, preparations for the second flight of 1996, *Columbia* on STS-75, a reflight of the Tethered Satellite System, also are on schedule. *Columbia* remains in the Bay 2 shuttle processing hangar and is being readied for installation of the three main engines early next week.



1995 GOAL: $460,000

CFC

STS-74 crew praises ground, support teams

By Karen Schmidt

The STS-74 crew praised the ground and support teams for their excellent work during return ceremonies at Ellington Field last month.

"Atlantis was perfect," Cameron said. "We had complete ability to do the job that we were sent up to do because the vehicle was so well prepared and ready. We made good steps for the future."

Cameron not only praised the ground crew but each of his crew members and expressed thankfulness that he was matched with such dedicated astronauts.

Pilot Jim Halsell remembered the flight control teams and the special job they did in keeping the crew on track.

"From the ascent team that took us into orbit, to the orbit teams that kept us on track while we were in space, to the entry team that brought us home again, you guys are just incredible," Halsell said.

Mission Specialist Chris Hadfield reflected on how well the training helped the mission run smoothly.

"Very few things went as planned, but everything went as trained," Hadfield said. "Thanks to the guys that trained us for this mission."

Hadfield also commended ground researchers who took the time to buy a guitar for the Mir 20 crew.

"For them to see that someone on the ground had thought of them and had spent the time to research and

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JSC Photo by Mark Sowa

JSC Acting Director George Abbey, left, welcomes home STS-74 Commander Ken Cameron at Ellington Field. Cameron returned with his fellow astronauts to Houston after a successful docking with the Russian Mir Space Station.